

1. “What species of turtle is the most prevalent in the Galapagos Islands?”
What is the statistical variable? What type of variable is it?
2. Darren measures the heart rate of 10 randomly selected students in his Algebra 2 class.
What is the population? What is the sample?
3. The Pew Research Center states that “24% of teens go online almost constantly.”
Is this a parameter or a statistic? Why?
4. Is there any bias in the question? Explain.
 - a. Should a state have the power to kill a person for breaking the law?
 - b. Don’t you think that Barry Sanders retired from the NFL too early?
 - c. What do you think would help students pay more attention in class?
5. Suppose you are researching the eating habits of people your age. What sampling method could you use to find the percent of students in your grade who eat five servings of fruit and vegetables each day? What is an example of a survey question that does not have bias?
6. A bookstore wants to determine how many books the people in the surrounding neighborhood read per month on average. They survey each customer who enters their store for one week. Identify any bias in this method. If appropriate, suggest a method more likely to produce a random sample.
7. Researchers randomly choose two groups from 17 volunteers. Over a period of 12 weeks, one group watches television before going to sleep, and the other does not. Volunteers wear monitoring devices while sleeping, and researchers record dream activity. Should the sample statistics be used to make a general conclusion about the population?
8. Identify the type of sampling method used.
 - a. A trucking company places a card with their office phone number on the door step of every home within 5 miles of their office.
 - b. A candidate for the Senate creates an automated message that calls every third listed phone number and reminds them to vote for him in the upcoming election.
 - c. A restaurant chain’s owners are trying to decide if they want to open a franchise in your town. To help them decide, they want to find out how often people in your town go out to eat. A researcher interviews people leaving a local restaurant.
9. List the mean, standard deviation and 5-number summary of each data set. Then graph a box-and-whisker plot and decide what type of distribution it has.
 - a. 13, 4, 10, 13, 1, 12, 13, 4, 11, 10
 - b. 5, 6, 5, 6, 4, 4, 3, 3, 5, 6, 8, 12
 - c. 9, 4, 10, 8, 1, 3, 7, 8, 6, 1, 7, 5, 7, 8, 5, 11, 13, 8, 15, 7